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(General - Patent Pending)**

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P 97 194.024

In Re Application Of: **RONALD L. CARR**

Serial No.
08/952,001

Filing Date
November 7, 1997

Examiner
Alison Pickard

Group Art Unit
3626

Title: **JOINT ASSEMBLY EMPLOYING MULTI-RING GASKET**

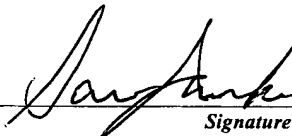
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Dated: **October 8, 2002**

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PATENT EXAMINING OPERATIONS

Applicant: Ronald L. Carr Group Art Unit: 3626
Serial No.: 08/952,001 Examiner: Alison Pickard
Filed: November 7, 1997 Docket No.: P 97 194.024
Title: JOINT ASSEMBLY EMPLOYING MULTI-RING GASKET

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October 8, 2002

SUPPLEMENTAL APPEAL BRIEF

Board of Patent Appeals and Interferences
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Greetings:

This Supplemental Appeal Brief is in response to the Office Action mailed July 17, 2002, and supersedes the original Appeal Brief filed on April 22, 2002 in the appeal in the above-captioned patent application. The Supplemental Appeal Brief was necessitated by the mailing of the Office Action.

(1) *Real Party in Interest.*

The real party in interest is KC Multi-Ring, Inc.

(2) *Related Appeals and Interferences.*

There are no related appeals or interferences.

(3) *Status of Claims.*

Claims 55, 60 - 62, 66 - 69, 73 - 78, 82 - 85, and 87 stand rejected.

Claims 56-58 and 88-92 are allowed.

Claims 59, 63-65, 70-72, 79-81, and 86 are objected to.

(4) *Status of Amendments.*

No Amendment was filed subsequent to the rejection of November 21, 2001.

(5) *Summary of the Invention.*

The invention of claim 55 reads on the specification and drawings as follows:

55. A gasket (e.g., 70 at page 15, line 29, Figure 11) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 16 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing and formed in a loop
and having an outer periphery (e.g., 72 at page 15, line 30, Figure
11);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 31, Figure 11); and

at least one spoke of said sealing material extending between said first strip and said second strip wherein remaining spaces therebetween are substantially void (e.g., 77 at page 15, line 32, Figure 11).

The invention of claim 60 reads on the specification and drawings as follows:

60. A gasket (e.g., 92 at page 16, line 15, Figure 13 or 70 at page 15, line 29, Figure 11) for providing a seal at the joint between a pair of pipe flanges (e.g., 12, 16 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery (e.g., 72 at page 15, line 30, Figure 13 or 74 at page 15, line 31, Figure 11);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 32, Figure 13 or 76 at page 15, line 31, Figure 11); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 13 or 78 at page 15, line 34, Figure 11), the gasket further comprising an open alignment spoke of said sealing material extending outwardly from said second strip (e.g., 94 at page 16, line 17, Figure 13), said open alignment spoke defining an alignment concavity (e.g., 96 at page 16, line 18, Figure 13) for placement adjacent a fastener.

The invention of claim 61 reads on the specification and drawings as follows:

61. The gasket of claim 60, further comprising a centering shelf (e.g., 162 at page 19, line 8, Figure 24) of said sealing material depending from said open alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges (e.g., 164 at page 19, line 11, Figure 24).

The invention of claim 62 reads on the specification and drawings as follows:

62. The gasket of claim 61, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges (e.g., 164, 166 at page 19, line 11, Figure 24), wherein the outer periphery of said second strip (e.g., 152 at page 18, line 37, Figure 24) is substantially congruent with the outer periphery of the smaller flange (164 at page 19, line 11, Figure 24), and wherein

said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange (166 at page 19, line 11, Figure 24).

The invention of claim 66 reads on the specification and drawings as follows:

66. The gasket of claim 60, wherein said first (e.g., 76 at page 15, line 31, Figure 11) and second (e.g., 74 at page 15, line 31, Figure 11) strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop (e.g., 72 at page 15, line 30, Figure 11), said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke (e.g., 77 at page 15, line 32, Figure 11) of said sealing material extending between said third strip and said first strip.

The invention of claim 67 reads on the specification and drawings as follows:

67. A gasket (e.g., 90 at page 16, line 10, Figure 12 or 70 at page 15, line 29, Figure 11) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 14 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery (e.g., 72 at page 15, line 30, Figure 12 or 74 at page 15, line 31, Figure 11);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 31, Figure 12 or 76 at page 15, line 31, Figure 11); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 11 or 12), the gasket further comprising a closed alignment spoke (e.g., 78 at page 15, line 33, Figure 11 or 12) of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture (80 at page 15, line 35) therethrough for receiving a bolt.

The invention of claim 68 reads on the specification and drawings as follows:

68. The gasket of claim 67, further comprising a centering shelf (e.g., 162 at page 19, line 8, Figure 25) of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

The invention of claim 69 reads on the specification and drawings as follows:

69. The gasket of claim 68, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges (e.g., 164, 166 at page 19, line 11, Figure 24), wherein the outer periphery of said second strip (e.g., 152 at page 18, line 37, Figure 24) is substantially congruent with the outer periphery of the smaller flange (164 at page 19, line 11, Figure 24), and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange (166 at page 19, line 11, Figure 24).

The invention of claim 73 reads on the specification and drawings as follows:

73. The gasket of claim 67, wherein said first (e.g., 76 at page 15, line 31, Figure 11) and second (e.g., 74 at page 15, line 31, Figure 11) strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop (e.g., 72 at page 15, line 30, Figure 11), said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke (e.g., 77 at page 15, line 32, Figure 11) of said sealing material extending between said third strip and said first strip.

The invention of claim 74 reads on the specification and drawings as follows:

74. The gasket of claim 67, wherein said closed alignment spoke has a tab portion (e.g., 160 at page 19, line 6, Figure 24 or 144 at page 19, line 5, Figure 25) that extends beyond the outer peripheries of the flanges.

The invention of claim 75 reads on the specification and drawings as follows:

75. The gasket of claim 74, wherein said tab portion includes identification data (disclosure in claims as filed).

The invention of claim 76 reads on the specification and drawings as follows:

76. The gasket of claim 60, further comprising a closed alignment spoke (e.g., 78 at page 15, line 33, Figure 11 or 12) of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture (80 at page 15, line 35) therethrough for receiving a bolt.

The invention of claim 77 reads on the specification and drawings as follows:

77. The gasket of claim 76, further comprising a centering shelf (e.g., 162 at page 19, line 8, Figure 25) of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

The invention of claim 78 reads on the specification and drawings as follows:

78. The gasket of claim 77, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges (e.g., 164, 166 at page 19, line 11, Figure 24), wherein the outer periphery of said second strip (e.g., 152 at page 18, line 37, Figure 24) is substantially congruent with the outer periphery of the smaller flange (164 at page 19, line 11, Figure 24), and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange (166 at page 19, line 11, Figure 24).

The invention of claim 82 reads on the specification and drawings as follows:

82. A gasket (e.g., 70 at page 15, line 29, Figure 11 or 92 at page 16, line 15, Figure 13) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 14 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery (e.g., 72 at page 15, line 30, Figure 11 or 13);

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip (e.g., 74 at page 15, line 31, Figure 11 or 13); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 11 and 13), further comprising an open alignment spoke (e.g., 94 at page 16, line 17, Figure 13) of said sealing material extending outwardly from said second strip, said open alignment spoke defining an alignment concavity (96 at page 16, line 18) for placement adjacent a fastener, further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip (e.g., 78 at page 15, line 33, Figure 12), wherein said closed alignment spoke includes an aperture (80 at page 15, line 35) therethrough for receiving a bolt, wherein said first and said second strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop (e.g., 72 at page 15, line 30, Figure 11), said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke (77 at page 15, line 32, Figure 11) of said sealing material extending between said third strip and said first strip.

The invention of claim 83 reads on the specification and drawings as follows:

83. The gasket of claim 76, wherein said closed alignment spoke has a tab portion (e.g., 160 at page 19, line 5, Figure 24) that extends beyond the outer peripheries of the flanges.

The invention of claim 84 reads on the specification and claims as follows:

84. The gasket of claim 83, wherein said tab portion includes identification data (disclosure in original claims).

The invention of claim 85 reads on the specification and drawings as follows:

85. A gasket (e.g., 102 at page 16, line 32, Figure 15 or 98 at page 16, line 25, Figure 14)) for providing a seal at the joint between a pair of pipe flanges (e.g., 12 and 14 at page 9, lines 7 - 8, Figure 5) for connecting one flange to the other, comprising:

a first strip of sealing material formed in a loop and having an outer periphery (e.g., 72 at page 15, line 30, Figure 14 or 15);

a second strip of said sealing material formed in a loop and having an outer periphery and inner periphery greater than said outer periphery of said first strip (e.g., 100 at page 16, line 27, Figure 14 or 15); and

at least one spoke of said sealing material extending between said first strip and said second strip (e.g., 77 at page 15, line 32, Figure 14 or 15) wherein remaining spaces therebetween are substantially void, and wherein said outer periphery of said first strip is substantially circular and said outer periphery of said second strip is substantially square (Figure 14 or 15).

The invention of claim 87 reads on the specification and drawings as follows:

87. The gasket of claim 85, further comprising at least one closed alignment spoke of said sealing material extending outwardly from said second strip (78 at page 15, line 33, Figure 14), said alignment spoke including an aperture (80 at page 15, line 35) therethrough for receiving a bolt.

(6) *Issues.*

1. Whether claim 55 is anticipated under 35 U.S.C. § 102(b) by Merwarth, U.S. Reissue Patent No. 11,858, or in the alternative, obvious under 35 U.S.C. § 103(a) in view of Merwarth, U.S. Reissue Patent No. 11,858.

2. Whether claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are obvious under 35 U.S.C. § 103(a) over Mastin, U.S. Patent No. 1,245,002, in view of Smith, U.S. Patent No. 4,002,344.

3. Whether claim 85 is obvious under 35 U.S.C. § 103(a) in view of Mastin, U.S. Patent No. 1,245,002.

(7) *Grouping of Claims.*

Where the grounds of rejection concern more than one claim, the claims are deemed to stand or fall with the broadest claim, for the purpose of this appeal only.

(8) *Arguments.*

Issue 1.

Whether claim 55 is anticipated under 35 U.S.C. § 102(b) by Merwarth, U.S. Reissue Patent No. 11,858, or in the alternative, obvious under 35 U.S.C. § 103(a) in view of Merwarth, U.S. Reissue Patent No. 11,858.

The rejection is based on Merwarth, U.S. Reissue Patent No. 11,858 (“Merwarth”). The Office Action states that it would have been obvious and a mere design choice to form the first and second strips and the spokes of the same material because “[i]t is not considered inventive to select a known material base[d] on its suitability for its intended use.” The Office Action further states that, “[w]hile Merwarth does not specify that the ‘soft metal’ of A, F, and C are the same soft metal, it is considered inherent that they are since the strips/spokes function as seals to ease manufacturing.” See pgs. 2-3 of the Office Action.

Errors in the Rejection

The rejection is inconsistent with the teachings of Merwarth. Contrary to the statement in the Office Action that it is inherent that A, F, and C are formed of the same soft metal, Merwarth specifies that the inner ring A is formed of a softer metal than the eyes C.¹ Merwarth states:

The outer ring [B & C] is composed of harder metal than the inner one [A], and is preferably formed from wire of a smaller size than the inner ring [A]. Pg. 1, lines 65-68.

This structure is indicated as being the preferred embodiment. See pg. 1, lines 61-70.

Rings A and B have different characteristics because they have different functions. As taught by Merwarth in regard to the embodiment of Figure 1, the eyes C of ring B are designed to fit over the bolt holes and make “the gasket concentric with the pipe,” so that inner ring A seals “the joint at all points around the center of the gasket.” Ring A is designed to bear the force of the flange first so that it can compress and “take the impressions of [the] . . . surfaces of [the] flanges, which...are usually rough, and to fill up inequalities in such surfaces.” Pg. 1, lines 87-90.

On the other hand, ring B is designed “to sustain the soft ring [A] against any pressure which might tend to distort or rupture it” Pg. 2, lines 2-6.

In regard to the embodiment of Figure 3, Merwarth states:

In the form of gasket illustrated in Figs. 3 and 4, . . . I have provided, as in the gasket shown in Figs. 1 and 2, an inner soft-metal packing-ring A, surrounded by a holder or retaining-ring B, having one or more eyes C . . . that are formed of the wire of the ring B, and in addition thereto I provide a second soft metal packing ring F, which surrounds and is attached to eyes C This construction provides a double packing for the joint, a packing [A] near the opening in the pipe, and a packing [F] near the outer peripheries of the flanges. The packing-rings A and F are preferably of larger wire than the holding or retaining ring B. pg. 2, lines 11-27 (emphasis added).

¹ The eyes C are formed from the outer ring B, see pg. 1, lines 69-70.

Thus Merwarth states that, in the preferred embodiment of Figs. 3 and 4, the ring A and the ring F are soft metal packing-rings that provide a double seal, while B is a holding or retaining ring. This embodiment is identical to the embodiment of Figs. 1 and Figs. 2, except for the added ring F, which provides a seal around the outer periphery of the pipes.

Merwarth also suggests that eyelets C (and therefore ring B) can be used for sealing, and “can be made of the same size wire as said rings A and F and of soft metal.” Pg. 2, lines 26-31 (emphasis added). But Merwarth does not go so far as to state that the eyelets C can be or should be made of the same soft metal as the ring A as alleged in the Office Action. It is readily apparent that doing so would negate the teachings above.

There is only one way to interpret Merwarth’s suggestion that is consistent with the teachings mentioned above. That is, the eyelets C could be used for sealing and formed as stated above and still retain the ring A according to Merwarth’s principle purpose by making the metal of ring B soft, but not as soft as the metal of ring A. For example, for joining two steel pipes, the metal of ring A could be pure copper, while the metal of ring B (and the eyes C) could be brass, which is harder than copper but still softer than the steel pipes. That way, the eyes C could provide sealing relative to the pipes while the ring B will still be effective to substantially strengthen the ring A and thereby sustain it against pressure.

On the other hand, if the rings A and B were formed of wire having both the same size and the same softness as proposed in the Office Action, the ring B would no longer be any stronger than the ring A, so that the essence of providing a relatively strong retaining material around the ring A would be lost. Moreover, the ring B would be equally as good for sealing as the ring A, and there would no longer be any need for the ring A since sealing is the only

function disclosed for the ring A. For either or both of these reasons, the modification proposed in the allegation is contrary to Merwarth's teachings.

Everything stated in Merwarth is consistent with the principle of forming the ring B from a harder material than the ring A for the purpose of providing a gasket having both a soft portion for sealing and a harder (and therefore stronger) retaining portion for retaining the soft ring A against pressure. It does not alter this basic principle or frustrate this basic purpose to form the ring B (and therefore the eyes C) of a "soft" material having the same "size" as that of the ring A as stated in Merwarth, unless and until that material becomes so soft that it is no longer any harder than the material of ring A as proposed in the Office Action. This is a clear line, established from the principles enunciated in Merwarth, that the allegation of obviousness clearly crosses.

Both MPEP 2143.01 and MPEP 2145(X)(D)(2) provide that it is improper to modify a reference against its own teachings. Making the ring B as soft as the ring A is contrary to the teachings of Merwarth. Therefore, the allegation of obviousness contravenes both MPEP 2143.01 and 2145(X)(D)(2).

Please note that this is true regardless of what other reasons may be offered in support of the allegation. All the other reasons alleged, i.e., (1) that it is not inventive to select a material known to be suitable for its intended use, (2) that the modification would "ease manufacturing", and (3) that what is claimed would be merely a design choice, fail to make a *prima facie* case for the simple reason that they all require modifying Merwarth against its own teachings.

For example, it may “ease manufacturing²” to form the gasket of a single material, but if doing so would be against the teachings of the reference on which the rejection is based, it does not matter, the rejection still violates MPEP 2143.01 and MPEP 2145(X)(D)(2) and is therefore improper.

In regard to the allegation of anticipation by inherency, inherency means that what is disclosed necessarily results in the claimed invention. MPEP 2112. *See also, Crown Operations Int’l Ltd. v. Solutia, Inc.* (Fed Cir., No. 01-1144, 5/13/02). Therefore, if the disclosure permits just one alternative possibility, that is enough to defeat an allegation of anticipation by inherency. As has been mentioned above, it is entirely consistent with Merwarth’s teachings to form the rings A and B of the same size wire as stated in the reference, using a soft copper wire for the ring A and a harder but still “soft” brass wire for the ring B. Therefore, it is entirely consistent with the teachings of Merwarth that the rings A and B are not formed of the same sealing material as claimed, and the claimed structure is not inherent by definition.

In regard to the statement in the Office Action that, “[i]t is not considered inventive to select a known material base[d] on its suitability for its intended use,” please note that nowhere in claim 55 is there any “selection” or specification of any known material for any purpose or intended use. The patentability of claim 55 is not based on, e.g., selecting a known material [such as, for example, nylon] where the material is known to have properties suitable for sealing. On the contrary, claim 55 recites no particular sealing material; rather, it recites a structure that is the same regardless of the sealing material used, and regardless of its intended use.

² It also may not ease manufacturing, and it is also unclear what it means to “ease manufacturing” in the first place. For example, to form the gasket as a unitary whole would typically require tooling, and the tooling is typically not easy to manufacture.

Returning to the allegation that it would “ease manufacturing” to form the gasket as claimed, the argument requires the gasket to be formed integrally. If the gasket is not formed integrally, it is irrelevant to the manufacturing process whether the parts of the gasket are formed of the same sealing materials or not. For example, it is irrelevant to the manufacturing process taught by Merwarth, because Merwarth teaches forming the parts separately and joining them together (page 1, lines 69 - 71).

Therefore, the allegation seems to be based on MPEP 2144.04(V)(B), i.e., that it would have been obvious to form what would otherwise be separate parts integrally³ (and therefore to form the parts of the same sealing material so this could be accomplished). Yet claim 55 does not require that any of its parts be formed integrally, and patentability of claim 55 is not premised on making any of its parts integral. Accordingly, MPEP 2144.04(V)(B) is not applicable.

In addition to having no apparent legal basis, the allegation also contravenes everyday experience. It is a well-known fact that many articles of manufacture employ parts formed of different materials that are not joined or formed integrally, even though there is, and always has been, a strong incentive in every art to “ease manufacturing.” Both Merwarth and Smith, U.S. Patent No. 4,002,344 are examples in the art of gaskets, and there are, of course, many other examples in other arts. In light of these facts, one cannot presume that “easing manufacturing” is sufficient motivation to direct persons of ordinary skill in any art to form parts that were

³ If the allegation is based on some other part of MPEP 2144, the Examiner is respectfully requested to make that clear in her Reply. In that case, please note in addition the requirement in MPEP 2144 to present “a convincing line of reasoning” (e.g., explaining why the motivation would be effective to direct the person of ordinary skill to the claimed invention).

conventionally formed of different materials out of the same materials just to permit integral manufacture.

Finally, the Office Action asserts that forming all of the claimed elements of the same sealing material would have been nothing more than a “mere design choice.” No citation to the MPEP or to any case law has been made, and Applicant cannot find any “merely a design choice” ground of rejection in the MPEP. Therefore, the rejection should be reversed either because it fails to give adequate notice of its ground, or because there is in fact no such ground for an obviousness rejection.

On the possibility that the rejection is based on MPEP 2144.04(I) (“Aesthetic Design Changes”), please note that the rejection would only be proper if it could be shown that the claimed invention has no mechanical function. Yet Applicant’s specification is replete with explanation showing why and how the invention provides for improved sealing, which is clearly a mechanical function.⁴

In summary, according to MPEP 2143.01 and MPEP 2145(X)(D)(2) it is improper to assert that it would have been obvious to modify Merwarth as alleged because that is contrary to its teachings. Moreover, each specific point mentioned in the Office Action as a basis for considering the invention either anticipated or obvious fails independently for the reasons discussed.

⁴ This has been pointed out before, yet the present Office Action continues to provide no clarification or explanation of the ground of rejection.

Why Claim 55 is Not Anticipated or Obvious

Claim 55 is not anticipated or obvious and is therefore patentable at least because it recites particular elements all of which must be formed of the same said sealing material.

Issue 2.

Whether claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are obvious under 35 U.S.C.

§ 103(a) as being unpatentable under Mastin, U.S. Patent No. 1,245,002 in view of Smith, U.S.

Patent No. 4,002,344.

The rejection is based on Mastin, U.S. Patent No. 1,245,002 in view of Smith, U.S. Patent No. 4,002,344. The Office Action states that it would have been obvious:

to include an open or closed alignment spoke as taught by Smith extending from the second strip [j of Mastin] out of the sealing material to provide a gasket which can be properly aligned between a variety of different sized flanges which would provide an efficient seal at the inner and outer edges of the flanges as well as around the bolt holes. See pg. 4 of the Office Action.

Errors in the Rejection.

The errors in the rejections are (1) the allegation of obviousness is contrary to MPEP 2145(X)(D)(2); (2) the combination alleged cannot in fact be made without further modification; and (3) even if the Mastin and Smith are combined as alleged, the combination would not yield the claimed invention. For any and all of these reasons, there is no *prima facie* case of obviousness as required by MPEP 2142.

In order to properly align the gasket in Smith between a variety of different flanges, a ring-shaped locator 41 having lugs 43 extending from its inside diameter is snapped into a groove 33 in the edge of the gasket. In addition, ears 46 and 51 extend from the outside diameter of the

locator. Apertures 47 and 52 on the ears are placed over bolt holes 16a in the flanges which center the gasket with respect to the bolt holes and ensure that the gasket is centered in relation to the central axis of the pipe to create an efficient seal. According to the teachings of Smith, sealing around the bolt holes is not necessary for an efficient seal, see Figure 1.

The gasket in Mastin is claimed to create a uniform, hermetic seal by providing ribs or ridges, g' , j , I' and k , that seal around the bolt holes and center the gasket. The ribs or ridges, g' , j , I' and k are of different heights and thickness in order to account for the different pressures to which different parts of the gasket will be subject to create the seal. See pg. 2, lines 46-56.

Mastin teaches that sealing around the bolt holes is necessary for an efficient seal.

To modify Mastin in view of Smith would require adding the locator of Smith to Mastin. But the locator of Smith does not seal around the bolt holes (see Smith and also Appendix B), and using such a structure is therefore contrary to the teachings of Mastin, since Mastin teaches that sealing around the bolt holes is necessary. Therefore Mastin teaches away from combining the locator of Smith with Mastin, and according to MPEP 2145(X)(D)(2), it is not proper to combine references where the references teach away from their combination.

Please note in addition that there is no way to combine the locator of Smith with the gasket of Mastin in a manner consistent with the teachings of both references since the bolt holes in Mastin are inside the outer periphery of the gasket and are therefore inaccessible once the flanges are brought together, and the locator of Smith is intended to be available for manipulation from outside the pipe joint after the flanges are brought together (see below).

Moreover, even if Smith and Mastin were combined, the combination would still fail to yield the claimed invention. The claimed invention requires that all of the claimed parts are

formed of the same sealing material, and there is no teaching in Smith to form the locator ring that allegedly would have been obvious to add to Mastin of any kind of sealing material. To the contrary, it is clear from Figure 1 of Smith that the locator ring performs no sealing function, because it makes no contact with the flanges.

Moreover, Smith teaches that the locator ring is formed separately from the seal ring 21, so there is no reason to suppose it would be formed of the same material as the rest of the gasket. In fact, Smith teaches that parts of the locator ring are adapted to be “snapped off” after the flanges have been drawn tight (Col. 3, lines 25 - 27), which implies the locator ring should be formed of a relatively brittle material as opposed to being formed of the same material that is employed for sealing.

The “Response to Arguments” section of the Office Action states that: (1) “Smith’s teachings would be applied to Mastin so the gasket can be used between a variety of different sized flanges, bolt circles or bolt diameters . . . [and (2)] Mastin already discloses that strips are provided at openings to provide a hermetic seal.” pg. 6.

The first statement above is simply a bare assertion and is nonresponsive to Applicant’s arguments. The second statement is also nonresponsive in that it has no apparent pertinence to any of the arguments or issues concerning the rejections. For example, it does not go any further to explain why it would have been obvious to combine Mastin and Smith, and it does not explain at all how to combine Mastin and Smith to create the claimed invention.

Why Claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are Not Obvious.

Claims 60 - 62, 66 - 69, 73 - 78, 82 - 84, and 87 are not obvious and are therefore patentable at least because they recite particular elements all of which must be formed of the same said sealing material.

Issue 3.

Whether claim 85 is obvious under 35 U.S.C. § 103 in view of Mastin, U.S.

Patent No. 1,245,002.

The rejection is based on Mastin, U.S. Patent No. 1,245,002. In the rejection of claim 85, the Office Action stated that “[u]sing a square shape is considered a design choice as applicant has not stated that using a square rather than a circle solves any stated problem or is for any particular purpose Further it appears that the circular shape of Mastin would perform equally as well.” Pg. 4 of the Office Action.

Errors in the Rejection

The rejection is based on an assertion that the claimed square outer periphery is “merely a design choice.” However, no citation to the MPEP or to any case law has ever been made, and Applicant cannot find any “merely a design choice” ground of rejection in the MPEP. Therefore, the rejection should be reversed either because it fails to give adequate notice of the nature of its ground, or because there is in fact no such ground for an obviousness rejection.

On the possibility that the rejection is based on MPEP 2144.04(I), please note that the rejection would only be proper if it could be shown that the claimed invention has no mechanical

function. Yet Applicant has explained that the square outer periphery has a mechanical function, i.e., it provides corners of the gasket that are available to protrude from a round pipe flange, thus allowing the user to easily grasp the gasket for placing it between the pipe flanges. Moreover, there does not appear to be any disagreement that the gasket is capable of providing this function.

Notwithstanding, it is asserted that the square outer periphery is a mere design choice because (1) the fact that the square outer periphery is used for centering is not claimed, and (2) the specification does not explain that the square outer periphery is critical. No legal authority has been cited for either of these arguments.

The first assertion (1) does not make sense. It is obviously not true that it is necessary *per se* to claim the use of an apparatus to avoid an obviousness rejection. That would mean that no apparatus claim would be patentable, because apparatus claims by definition claim an apparatus, not a use. Rather, it is only necessary to claim a use for the apparatus if the apparatus itself is unpatentable and it is necessary to claim a use to make a patentable distinction. Therefore, to argue that the apparatus is unpatentable because it does not recite a use reasons entirely backwards: It must first be shown that the apparatus is unpatentable before it can be concluded that the claim must therefore recite a use in order to make it patentable.

The second assertion (2) flatly contradicts MPEP 716.02(f):

Although the purported advantage . . . was not disclosed in the specification, evidence and arguments rebutting the conclusion that such placement was a matter of “design choice” should have been considered as part of the totality of the record. “We have found no cases supporting the position that a patent application’s evidence or arguments traversing a §103 rejection must be contained in the specification. There is no logical support for such a proposition as well, given that obviousness is determined by the totality of the record, including, in some cases most significantly, the evidence and arguments proffered during the give-and-take of *ex parte* patent prosecution.” (Quoting *In re Chu* 66 F.3d at 299, 36 USPQ2d at 1095).

The rejection is also in error insofar as it is based on the following mis-statement of fact: “the circular shape of Mastin would perform equally as well.” To reiterate, a square outer periphery provides corners of the gasket that are available to protrude from a round pipe flange, thus allowing the user to easily grasp the gasket for placing it between the pipe flanges. In order for a circular shape to be used for the same purpose, more material would have to be employed because excess material would have to be provided around the entire circumference of the gasket, thereby increasing material costs. Therefore, it is advantageous to use a square outer periphery to solve the problem of grasping the gasket from outside the pipe joint, and a circular shape would not work equally as well. This advantage is inherent in the structure claimed.

The rejection is further in error insofar as it is based on the following mis-statement of fact: “[n]either Figure 14 nor 15 (the only figures showing a square strip) show corners that would project past a flange.” Pg. 7.

Figures 14 and 15 show a gasket having corners. Whether those corners would project past a flange or not depends on the size of the flange, and the size of the gasket. No flange is shown in Figures 14 and 15, and no dimensions are given for the gasket. Therefore, it is not possible from Figures 14 and 15 to determine whether the corners would project past a flange or not.

Yet obviously, if the gasket is too small for the flange with which it is used, the corners will not project past the flange, and if the gasket is used with an appropriately sized flange, the corners will project past the flange. Regardless, claim 85 defines a gasket that, as explained

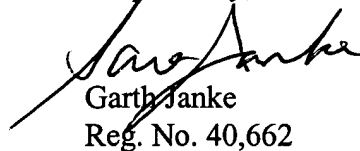
above, inherently provides a structural advantage over a gasket having a circular shape. There has been no legal authority cited thus far for ignoring this fact when considering patentability.

Why Claim 85 is Not Obvious.

Claim 85 is not obvious and is therefore patentable at least because it recites a square outer periphery of the gasket.

For the reasons presented above, the Board is respectfully requested to reverse the rejections and direct the Examiner to pass this case to issue.

Respectfully, submitted



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APPENDIX A

55. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing and formed in a loop and having an outer periphery;

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip wherein remaining spaces therebetween are substantially void.

60. A gasket for providing a seal at the joint between a pair of pipe flanges and for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery;

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip, the gasket further comprising an open alignment spoke of said sealing material extending outwardly from said second strip, said open alignment spoke defining an alignment concavity for placement adjacent a fastener.

61. The gasket of claim 60, further comprising a centering shelf of said sealing material depending from said open alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

62. The gasket of claim 61, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges, wherein the outer periphery of said second strip is substantially congruent with the outer periphery of the smaller flange, and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange.

66. The gasket of claim 60, wherein said first and second strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a

loop, said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke of said sealing material extending between said third strip and said first strip.

67. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery;

a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip, the gasket further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture therethrough for receiving a bolt.

68. The gasket of claim 67, further comprising a centering shelf of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

69. The gasket of claim 68, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges, wherein the outer periphery of said second strip is substantially congruent with the outer periphery of the smaller flange, and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange.

73. The gasket of claim 67, wherein said first and second strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop, said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke of said sealing material extending between said third strip and said first strip.

74. The gasket of claim 67, wherein said closed alignment spoke has a tab portion that extends beyond the outer peripheries of the flanges.

75. The gasket of claim 74, wherein said tab portion includes identification data.

76. The gasket of claim 60, further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture therethrough for receiving a bolt.

77. The gasket of claim 76, further comprising a centering shelf of said sealing material depending from said closed alignment spoke and extending so as to be substantially congruent with the outer periphery of at least one of the flanges.

78. The gasket of claim 77, wherein the flanges have corresponding inner and outer peripheries, wherein the outer periphery of one of the flanges is smaller than the outer periphery of the other of the flanges, wherein the outer periphery of said second strip is substantially congruent with the outer periphery of the smaller flange, and wherein said centering shelf extends so as to be substantially congruent with the outer periphery of the larger flange.

82. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

- a first strip of a material that is adapted for sealing which is formed in a loop and has an outer periphery;

- a second strip of said sealing material formed in a loop and having an inner periphery that is greater than the outer periphery of said first strip; and

- at least one spoke of said sealing material extending between said first strip and said second strip, further comprising an open alignment spoke of said sealing material extending outwardly from said second strip, said open alignment spoke defining an alignment concavity for placement adjacent a fastener, further comprising a closed alignment spoke of said sealing material extending outwardly from said second strip, wherein said closed alignment spoke includes an aperture therethrough for receiving a bolt, wherein said first and said second strips have corresponding inner peripheries, the gasket further comprising a third strip of said sealing material formed in a loop, said third strip having an outer periphery that is less than the inner periphery of said first strip, and at least one inner spoke of said sealing material extending between said third strip and said first strip.

83. The gasket of claim 76, wherein said closed alignment spoke has a tab portion that extends beyond the outer peripheries of the flanges.

84. The gasket of claim 83, wherein said tab portion includes identification data.

85. A gasket for providing a seal at the joint between a pair of pipe flanges for connecting one flange to the other, comprising:

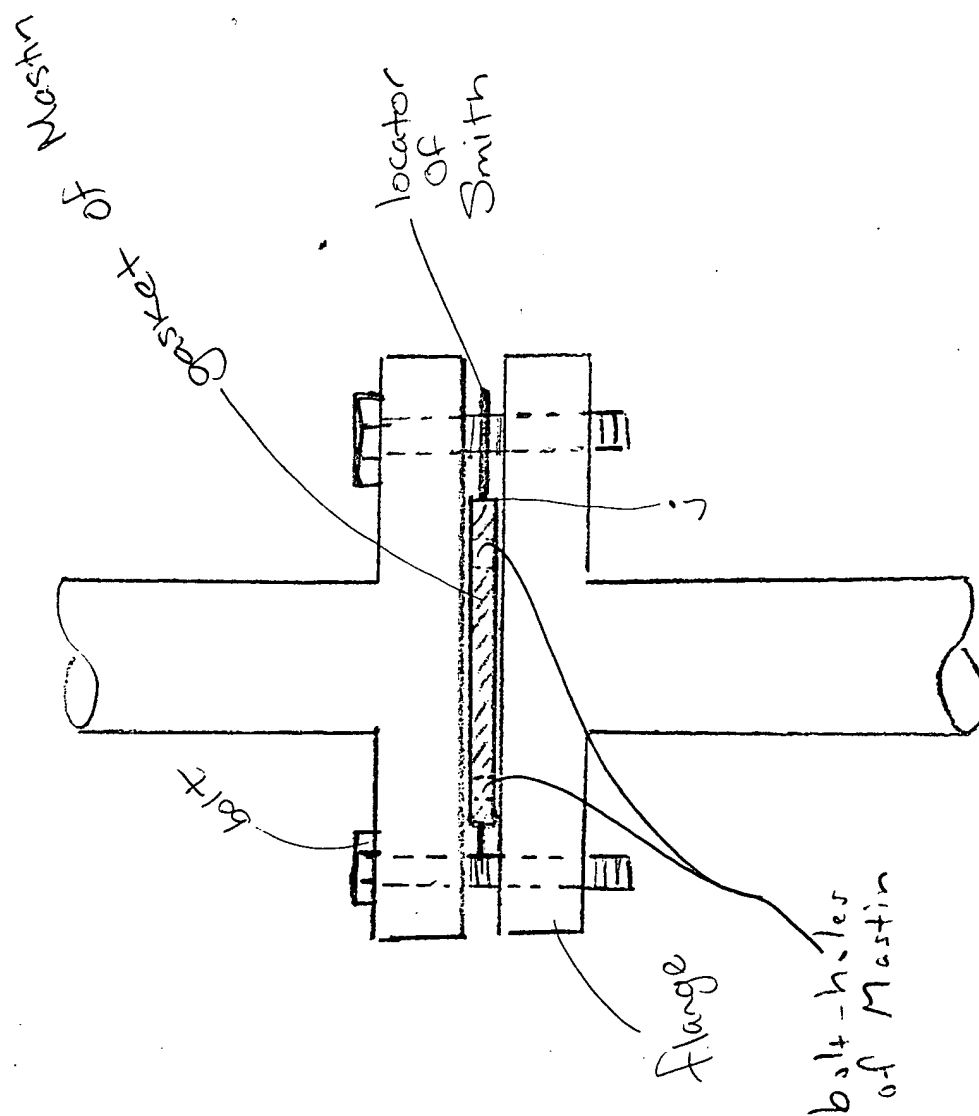
a first strip of sealing material formed in a loop and having an outer periphery;

a second strip of said sealing material formed in a loop and having an outer periphery and inner periphery greater than said outer periphery of said first strip; and

at least one spoke of said sealing material extending between said first strip and said second strip wherein remaining spaces therebetween are substantially void, and wherein said outer periphery of said first strip is substantially circular and said outer periphery of said second strip is substantially square.

87. The gasket of claim 85, further comprising at least one closed alignment spoke of said sealing material extending outwardly from said second strip, said alignment spoke including an aperture therethrough for receiving a bolt.

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APPENDIX B
